

GRAIN ORIENTATION IN WOODTURNING

**HOW YOUR CUT AFFECTS THE WAY
YOUR BOWL LOOKS**

GRAIN ORIENTATION IN WOODTURNING

- A General Remarks**
- B Open Bowls**
- C Closed Forms**
 - » Straight Grain**
 - » Feathered Grain (crotches)**
 - » Burls**
 - » Voids**
 - » Other**

GRAIN ORIENTATION IN WOODTURNING

- » **A) Open Bowls**
- » **Straight grain – see drawings 1,3 and 6**
- » **Feathered grain**
- » **Where two or more branches on a tree separate, the grains grow together producing a figure looking like a feather. Depending on the stresses on the joint, the wood, the thickness, the angle etc., some spectacular grain may be produced. (See drawing 9)**
- » **Burls**
- » **Some Burls tend to show an attractive flame figure if a bowl is turned with the bottom of the bowl away from the bark. See drawing 10)**

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- » **Voids**
- » **Voids and bark inclusions can add attractive design details. For an open bowl, voids are not generally attractive if they are on the rim or in the bottom.**

- » **Others**
- » **Many woods display figure, wavy grain patterns that can add striking design features. Sometimes it is possible to make out the figure from the outside, however often it is only revealed once the wood is cut.**
- »
- » **If you turn an open form into a piece of wood, always orient the more interesting grain on the bottom, other wise when you hollow you cut away the best part.**

- » **B) Closed Forms**

- » **Straight grain – (see drawings 2,4,57 and 8.**

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Feathered Grain

A closed form could be turned from a crotch in different ways. Turning a closed form in the same direction as an open bowl, the feather will appear on the outside of the closed form . Cutting the log parallel to the bark and then turning a hollow form will produce a surface like marble. See drawing 11)

Burls

The flame pattern will appear on the outside of the closed form if the burl is cut the same way as for an open bowl. (See drawing 12)

Voids

A closed form offers a wider choice where voids may appear than an open bowl. Contrary to a void looking out of place at the rim, an uneven opening of the closed form tends to look attractive.

Others

Figure and other grain patterns look similar on closed as on open forms.

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A) General Remarks

When wood is turned wet it will distort when it dries. Which way it distorts is dependent in part on the grain orientation. As wood shrinks differently across the the grain than along the grain a bowl generally becomes oval when it is dry. In order to be able to turn it round again after it dries, the thickness needs to be enough to get rid of the oval. On the other hand, the thinner the wall thickness is left, the less likely the bowl is to split when it dries. A good rule of thumb is to leave the wall about 10 % of the diameter of the bowl, so for a 12 “ diameter bowl the wall should be turned down to just over 1 inch.

Many woods have a striking color contrast between the heartwood and the sapwood. The inclusion or partial inclusion of sapwood offers many design possibilities. The attached drawings show some possibilities as to how to incorporate the sapwood into the design.